# TRAFFIC CONDITIONS DURING SAFETRACK SURGE 1, JUNE4-16

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Citizens Advisory Committee
July 14, 2016

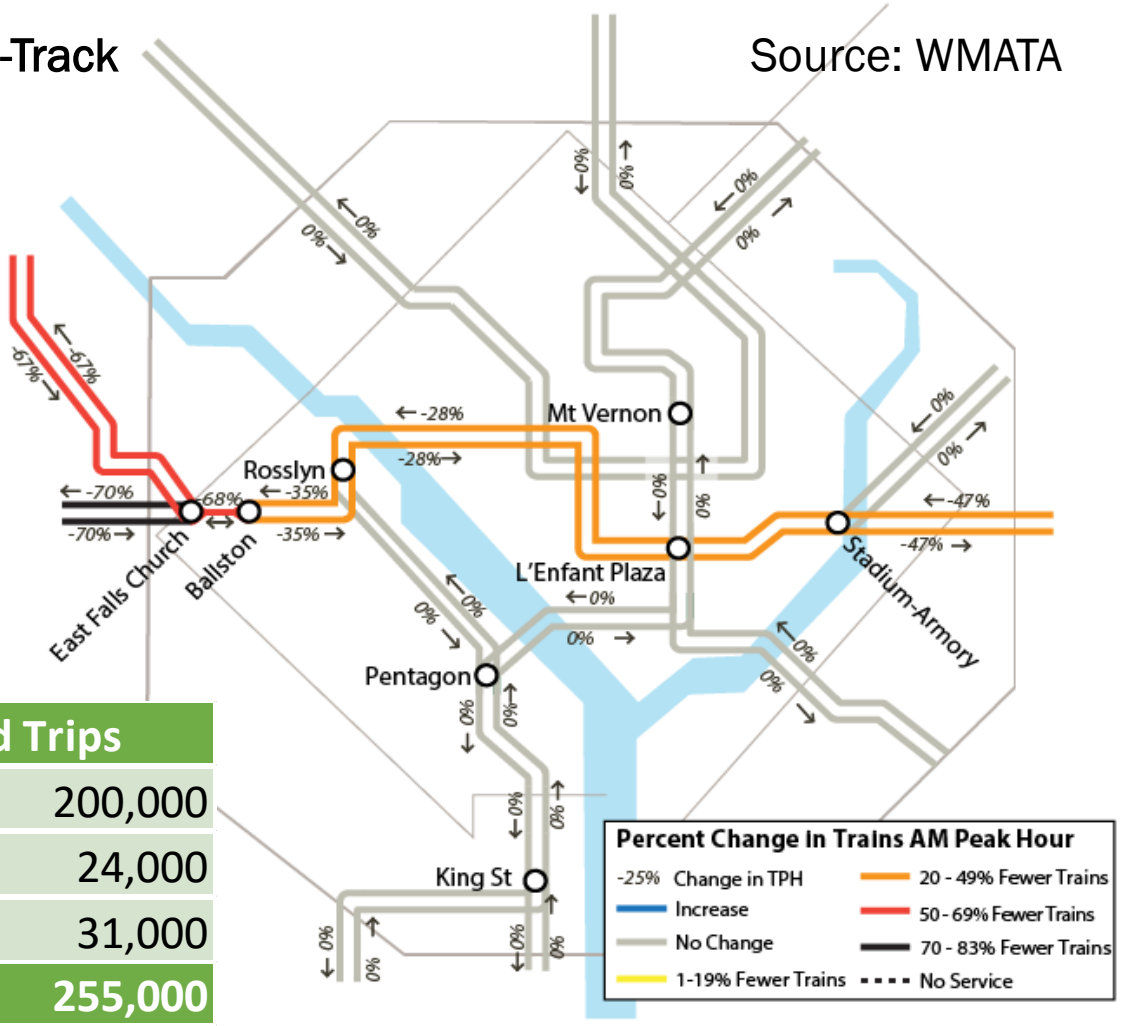
# Surge 1

**1 June 4 - 16**

## East Falls Church to Ballston Single-Track

| | |
|---|---|
| Total Days | 13 |
| Weekdays | 9 |
| Weekend Days | 4 |
| Holidays | 0 |

Source: WMATA



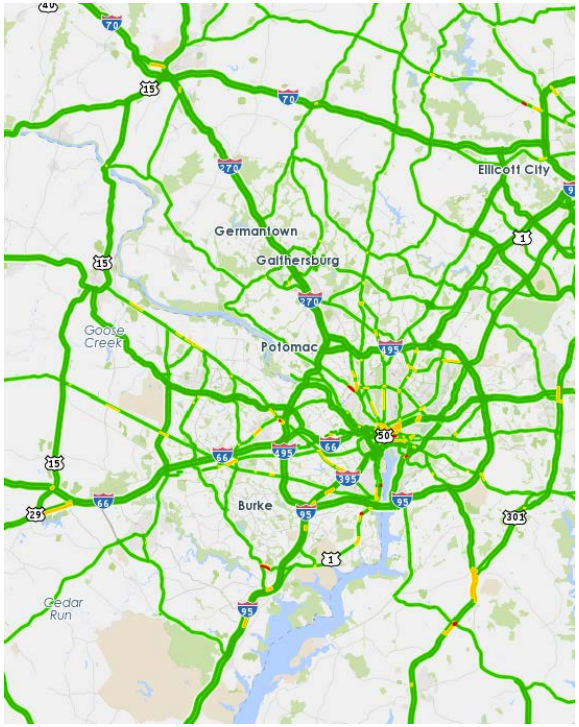

**About 35% of daily trips impacted**

Total Impacted Peak Trips per Day

| Service Change | Impacted Trips |
|---|---|
| 20% - 49% Fewer Trains | 200,000 |
| 50% - 69% Fewer Trains | 24,000 |
| 70% - 83% Fewer Trains | 31,000 |
| **Total** | **255,000** |

# Roadway Travel Time and Speed Data

- I-95 Corridor Coalition Vehicle Probe Project
  http://i95coalition.org/projects/vehicle-probe-project/
- Speed and travel time provided by INRIX, Inc.
  - For each directional segment
  - Every 1-minute
- Data coverage in the Washington region
  - Freeways: 720 directional miles
  - Arterials: 4,780 directional miles
  - Total: 5,500 directional miles
- Source of data: mobile apps, commercial fleets, in-vehicle devices, etc.

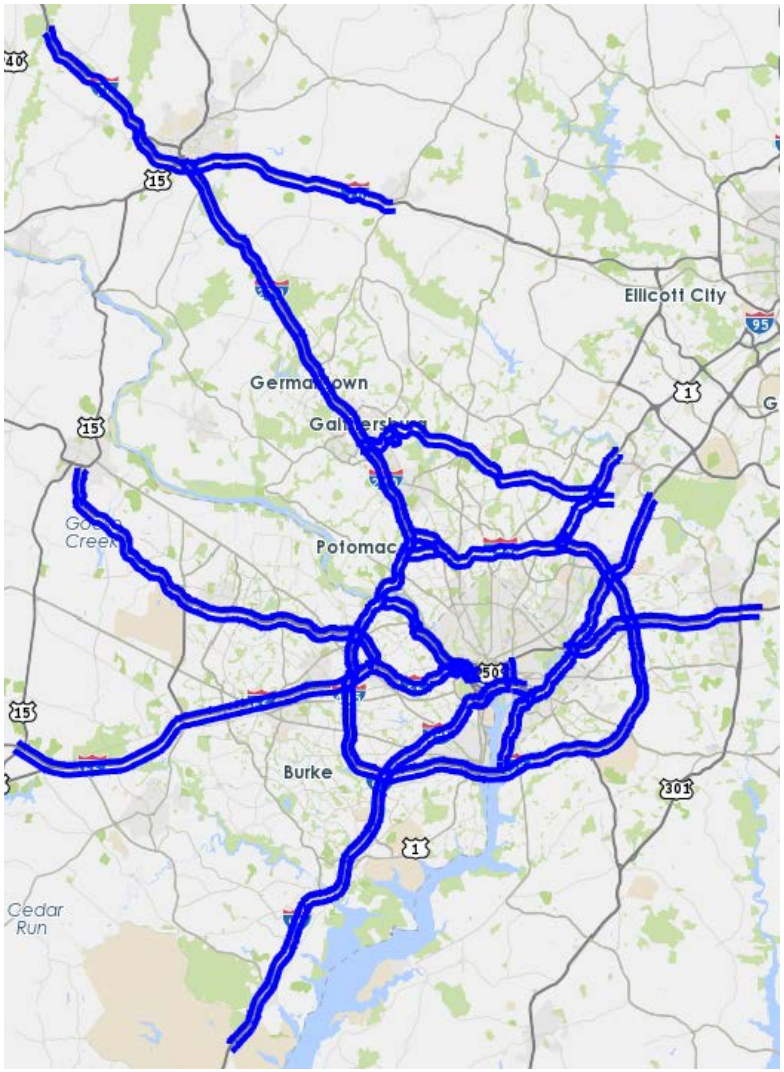



# Methodology

- Typical conditions: May 2016 conditions, e.g.
  - Typical Monday condition is the average of May 9, 16 and 23
  - Weekdays only (weekends ignored)
- Scope:
  - Regional overview by freeways and arterials
  - Selected routes
  - Road segments

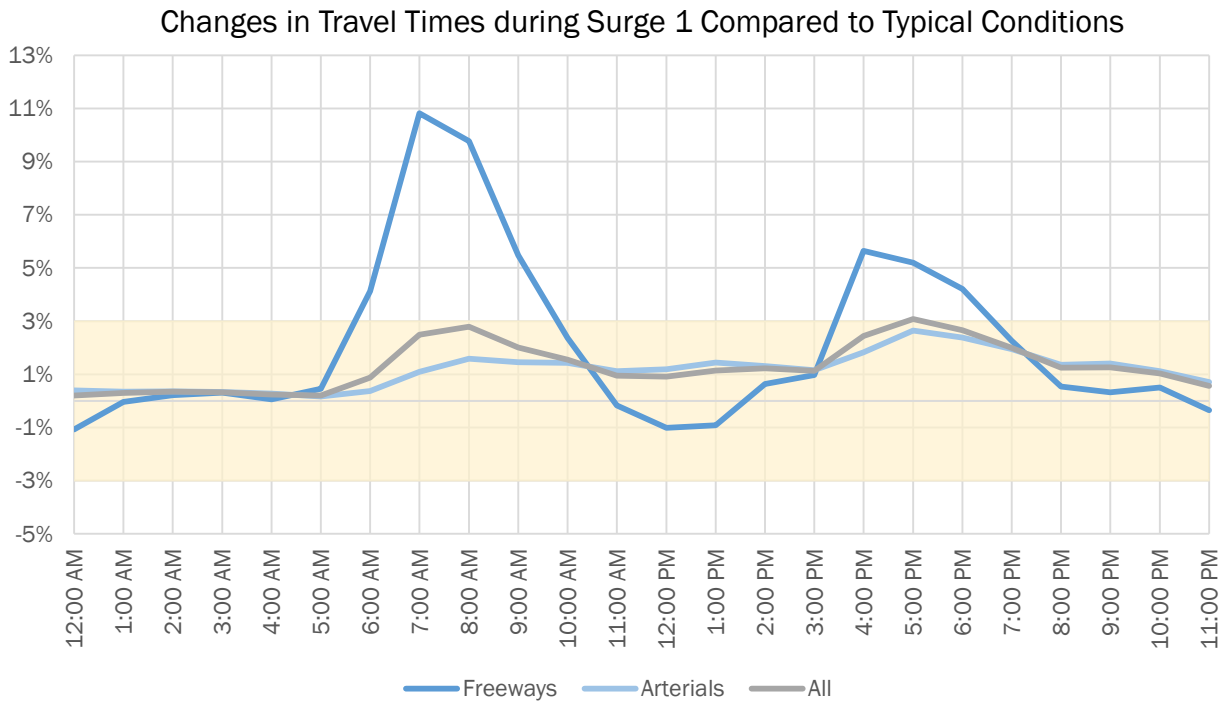
# Freeways

- Both directions
- About 720 directional miles
- Including speed & travel time reports for
  - I-395 HOV Lanes
  - I-95 Express Lanes
  - I-495 Express Lanes



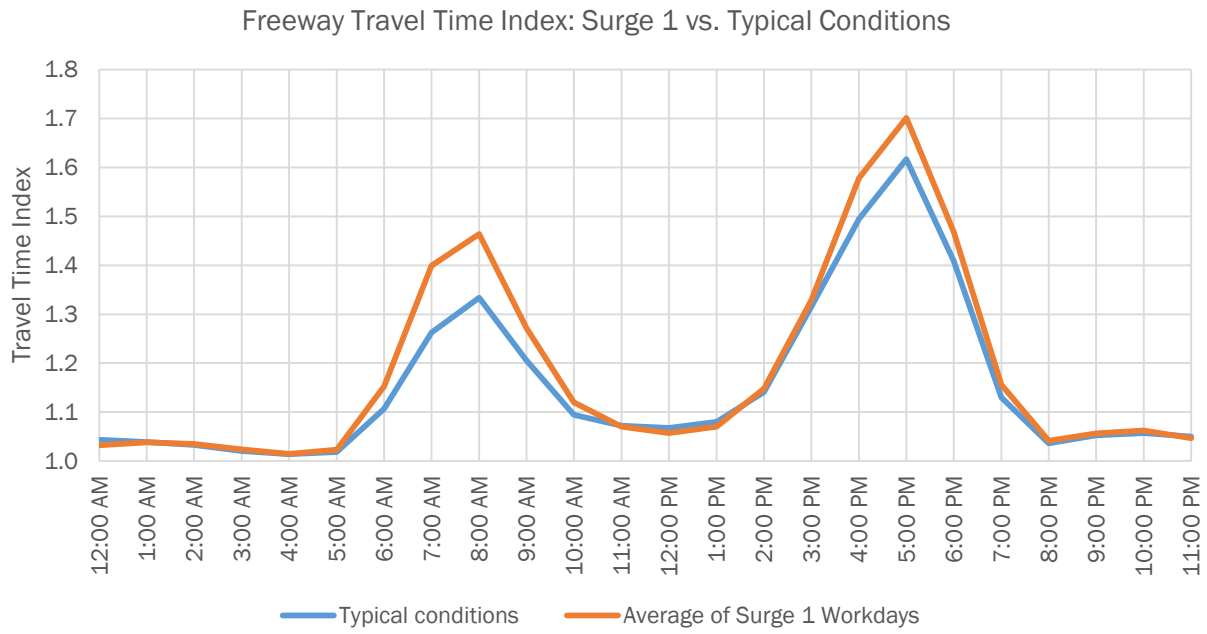
# Overall Increased Congestion

- Freeways saw the largest increases, especially weekday mornings
  - 11% increase between 7:00-8:00 A.M.
  - 6% increase between 4:00-5:00 P.M.
- Arterial roadways also experienced increased travel times but the increase was less than 3% throughout the day



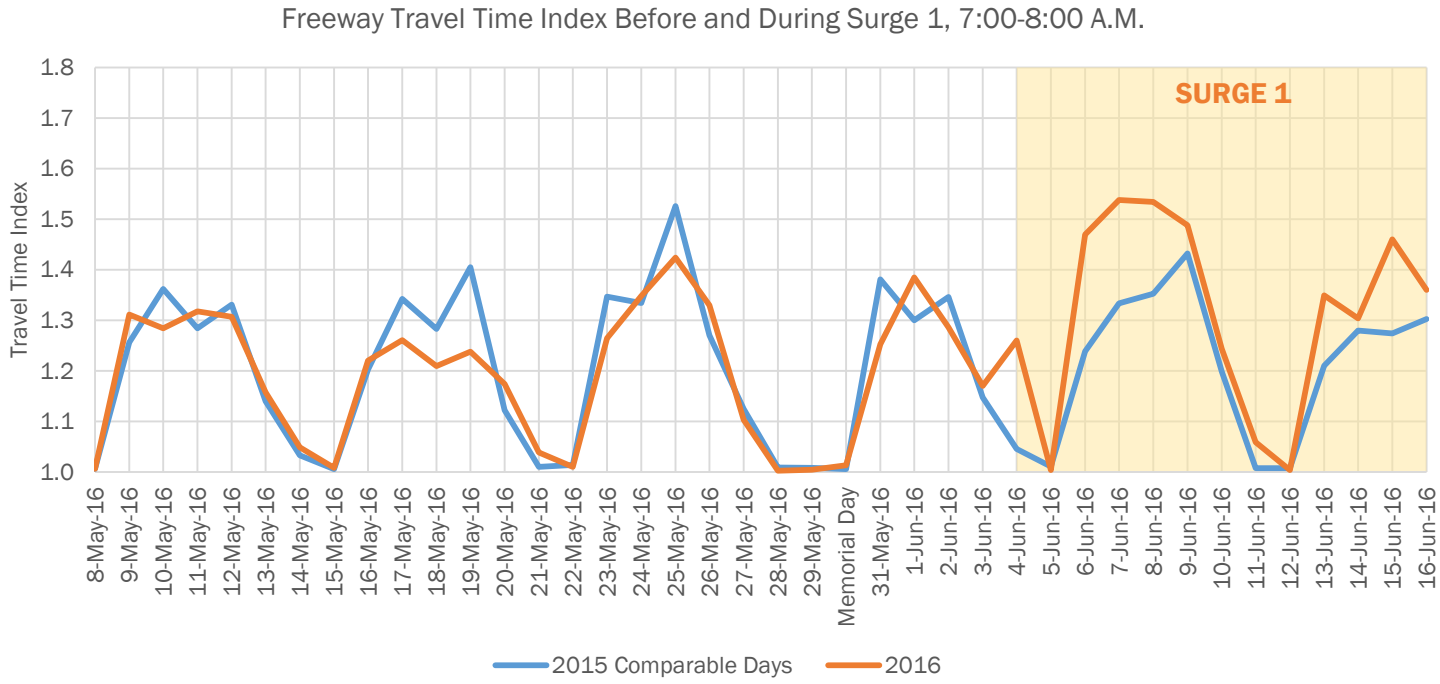
# Peak Spreading and Worsening

- During Surge 1, both the AM and PM peak periods were longer and worse than normal.
- The worst traffic occurred between 8:00 and 9:00 A.M. and 5:00 and 6:00 P.M., the same peak hours as a typical weekday. However, the greatest increase in congestion in the AM peak was observed one hour earlier than the normal peak hour (shown in previous slide)



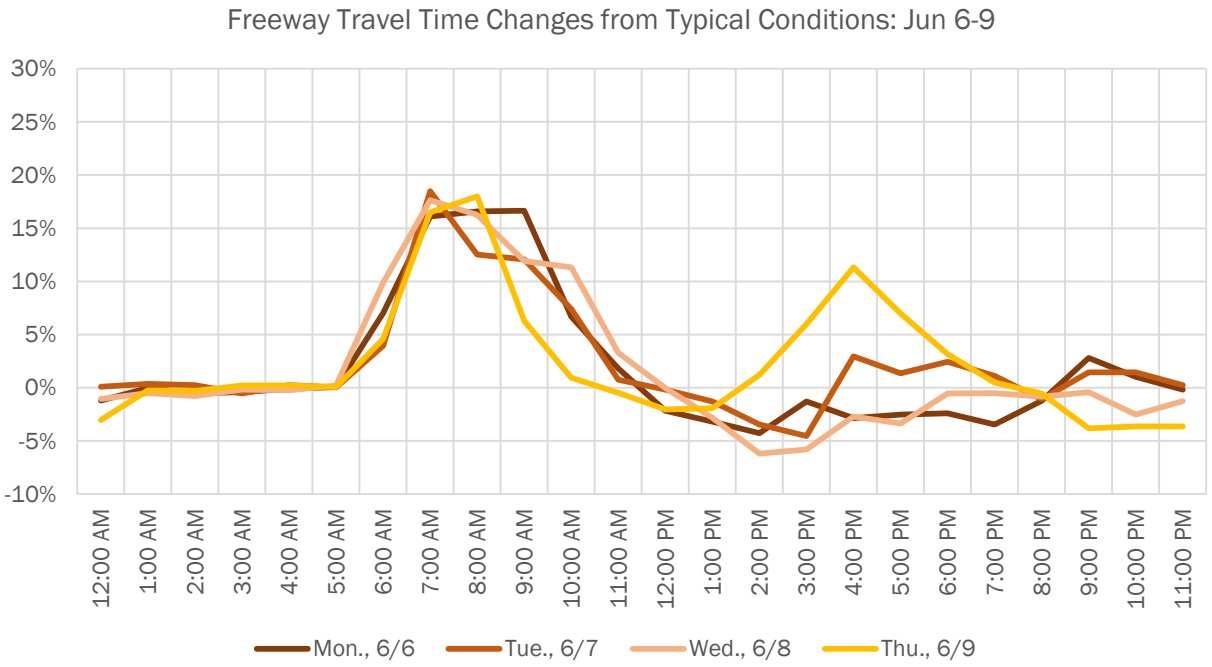
# A New Traffic Pattern at Onset

- A new traffic condition pattern was noticeable between 7:00 and 8:00 A.M. on area's freeways, especially during the first week.
- Congestion levels during this time were higher than the same time one year earlier and May 2016, including the week before Memorial Day, when traffic is usually worse than normal



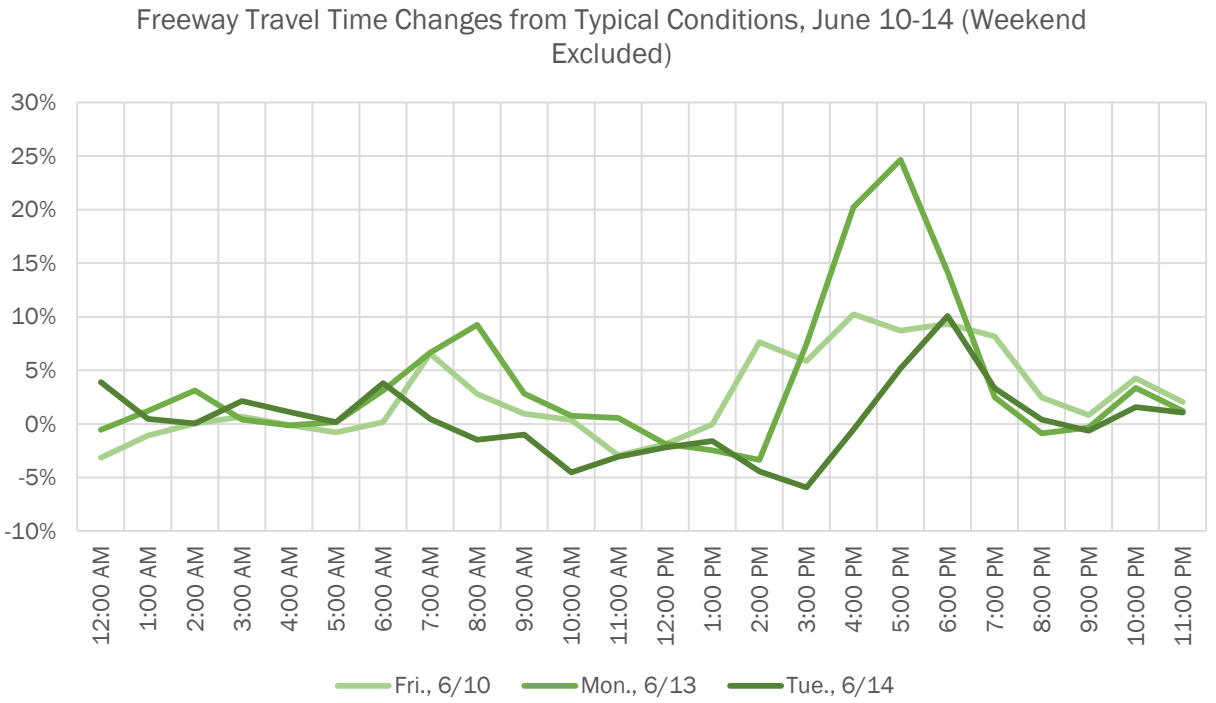
# Stage 1 (6/6-9): Sudden, Large Increase in AM

- Congestion patterns changed in notable ways over the course of Surge 1 and they might be an indication of travelers' adjustments to the new travel pattern
  - During the first four weekdays of Surge 1 (Monday (6/6) through Thursday (6/9)), the AM peak period saw much larger increases in congestion than the PM peak period



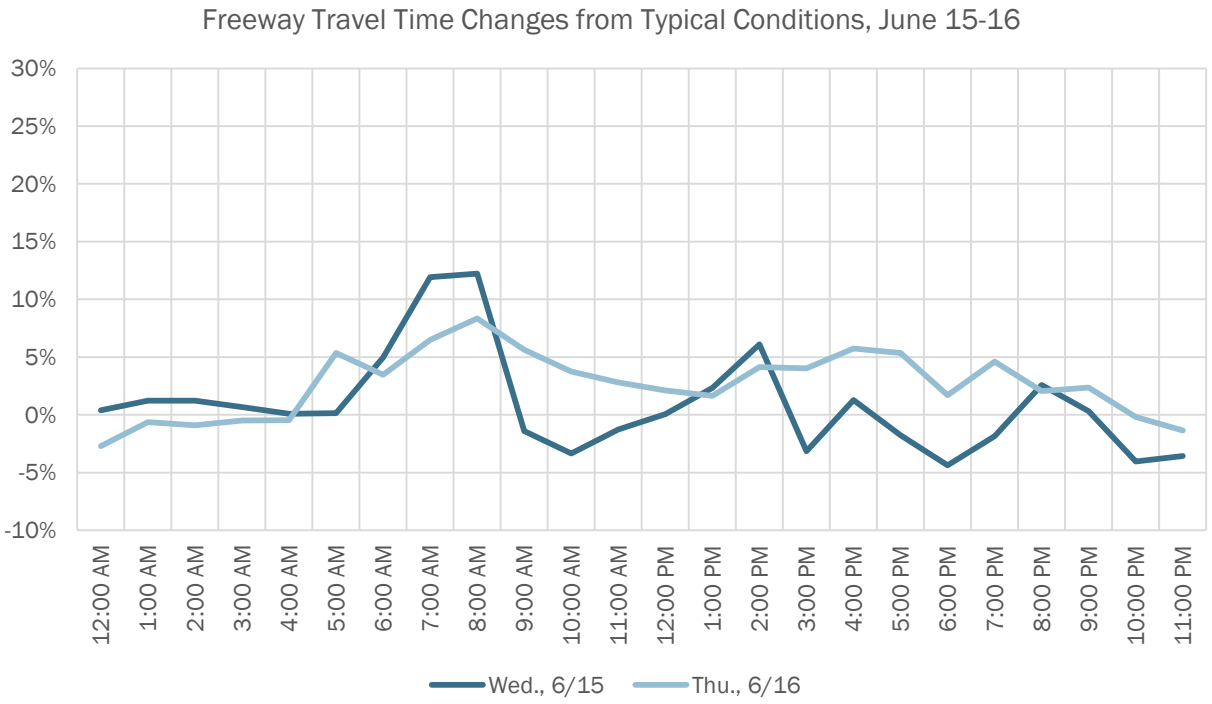
# Stage 2 (6/10-14): Larger Increase in PM

- From Friday (6/10) through Tuesday (6/14), excluding Saturday and Sunday, that pattern reversed and the PM peak period saw the greatest increases in congestion



# Stage 3 (6/15-16): Larger Increase in AM Again

- Toward the end of the surge, from Wednesday (6/15) through Thursday (6/16), the AM peak period again had larger increases than the PM peak period, but still less than in the first four weekdays of the surge



# Segments w/ Most-Significant Changes: 8:00-9:00 AM

Travel Time Increases in AM Peak Hour (8:00-9:00 A.M.) in Surge 1
Compared to Typical Conditions Observed in May 2016

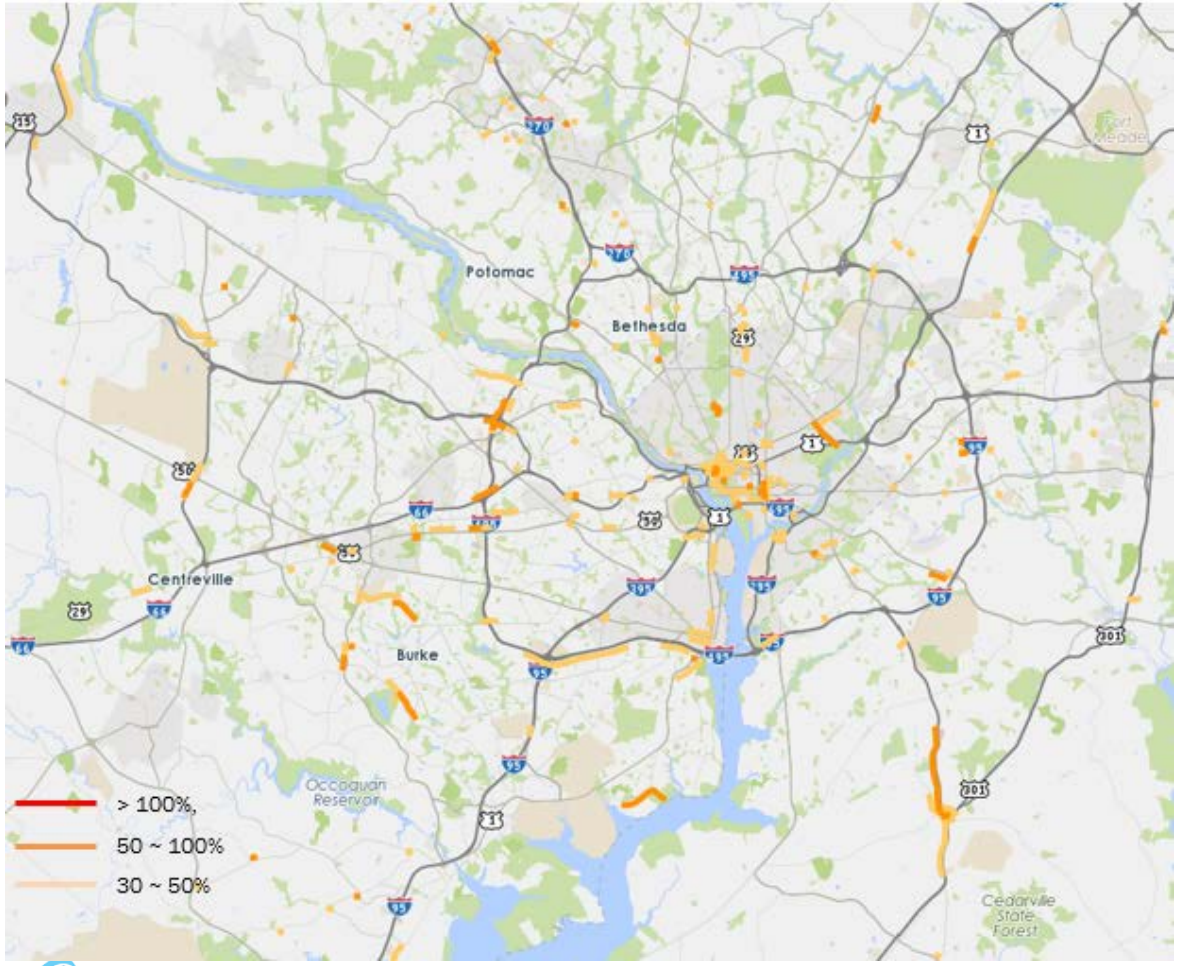

The greatest increases in congestion occurred in the triangle formed by I-66 EB inside I-495, George Washington Parkway, I-495 and VA-267

Significant increases in congestion occurred on I-95/I-495 inner-loop from MD-5 to I-295, US 50 WB between I-95/I-495 and MD-201/Baltimore-Washington Parkway, I-495 outer-loop at I-95 in MD

Notable increases in congestion occurred on VA-267 EB from VA-286 to VA-7; I-395 NB; and I-95 SB in MD

# Segments w/ Most-Significant Changes: 5:00-6:00 PM

Travel Time Increases in AM Peak Hour (5:00-6:00 P.M.) in Surge 1
Compared to Typical Conditions Observed in May 2016




The greatest increases in congestion occurred mostly on arterial routes in DC and a few other spots, including I-495 outer-loop at VA-267, VA-267 EB at I-495, I-495 outer-loop at Springfield interchange, I-66 WB at I-495, and US-50 WB at I-495.

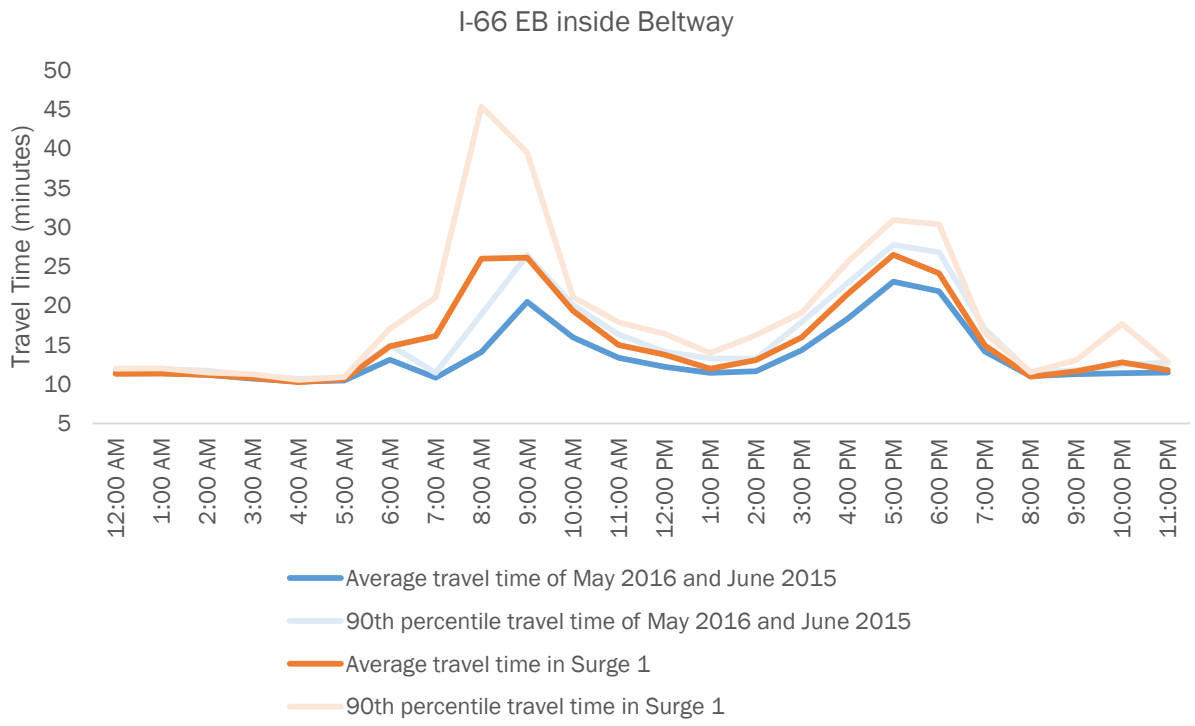
Increases in the PM peak hour were far less severe than in the AM peak hour.

# Route Travel Times

- Eight routes studied, more routes explored
- I-66 EB inside the Beltway (parallel facility along Surge 1) had the largest increases in travel times among all studied routes
- Freeways had larger increases in travel times than arterials
- For most routes, both the average and the 90$^{th}$ percentile travel times* increased over typical conditions

* 90% of the travel times are shorter than this 90th percentile travel time.

# Route Travel Time: I-66 EB Inside I-495



# Conclusions

- Regional overall traffic congestion increased during SafeTrack Surge 1, especially in the AM peak of the first four weekdays
  - Freeways had larger congestion increases than arterials; the AM peak period had larger increases than the PM peak period
  - Most significant congestion increases observed in northern Virginia along I-66 EB and VA-267 EB inside the Beltway, in the vicinity of the Metrorail track work between East Falls Church and Ballston stations
  - Congestion increases also observed on GW Parkway, I-395 NB, I-295 NB and several sections of the Beltway
- The increase of congestion tailed off towards the end of Surge 1, an indication of travelers' adjustments to the new travel pattern in the region
- **It is worthwhile to closely monitor the first few weekdays of each Surge, and provide timely information to the public if significant congestion increases are observed**

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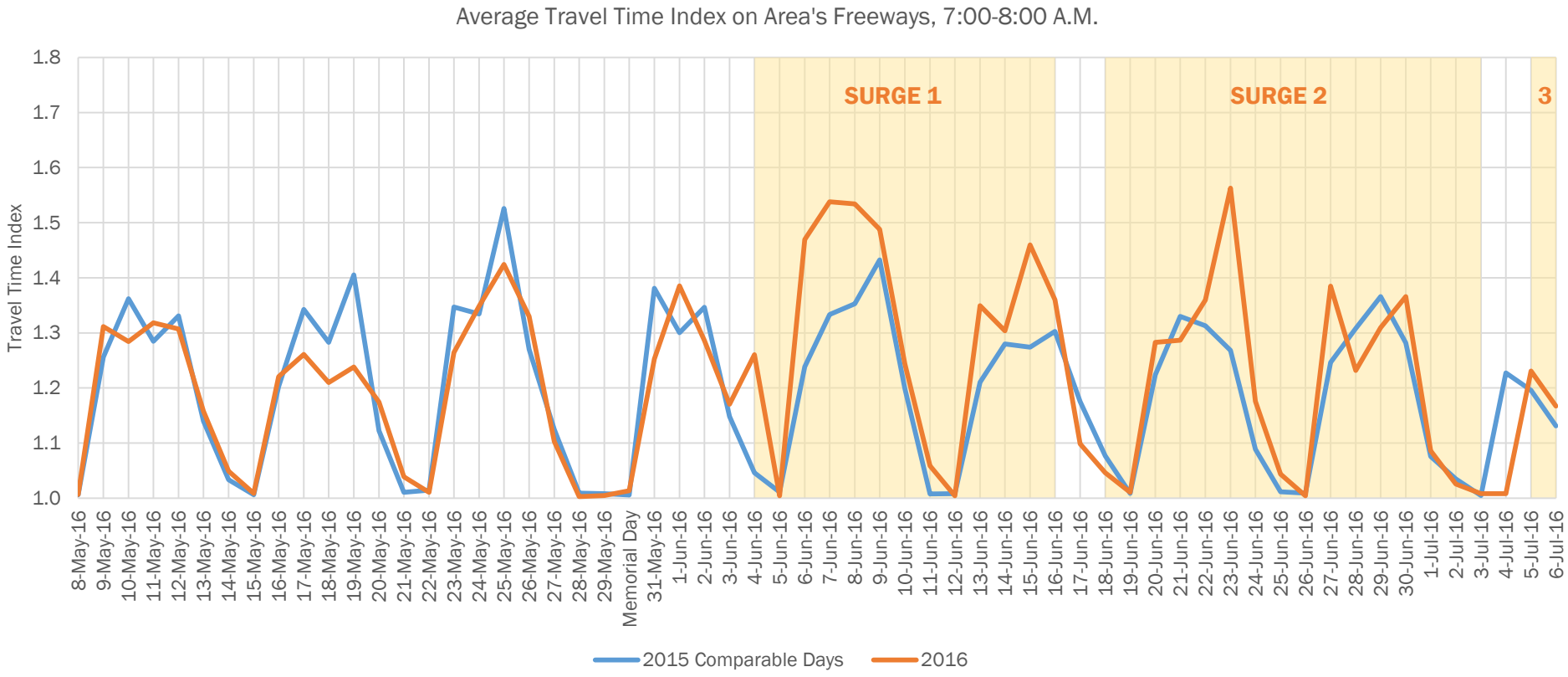
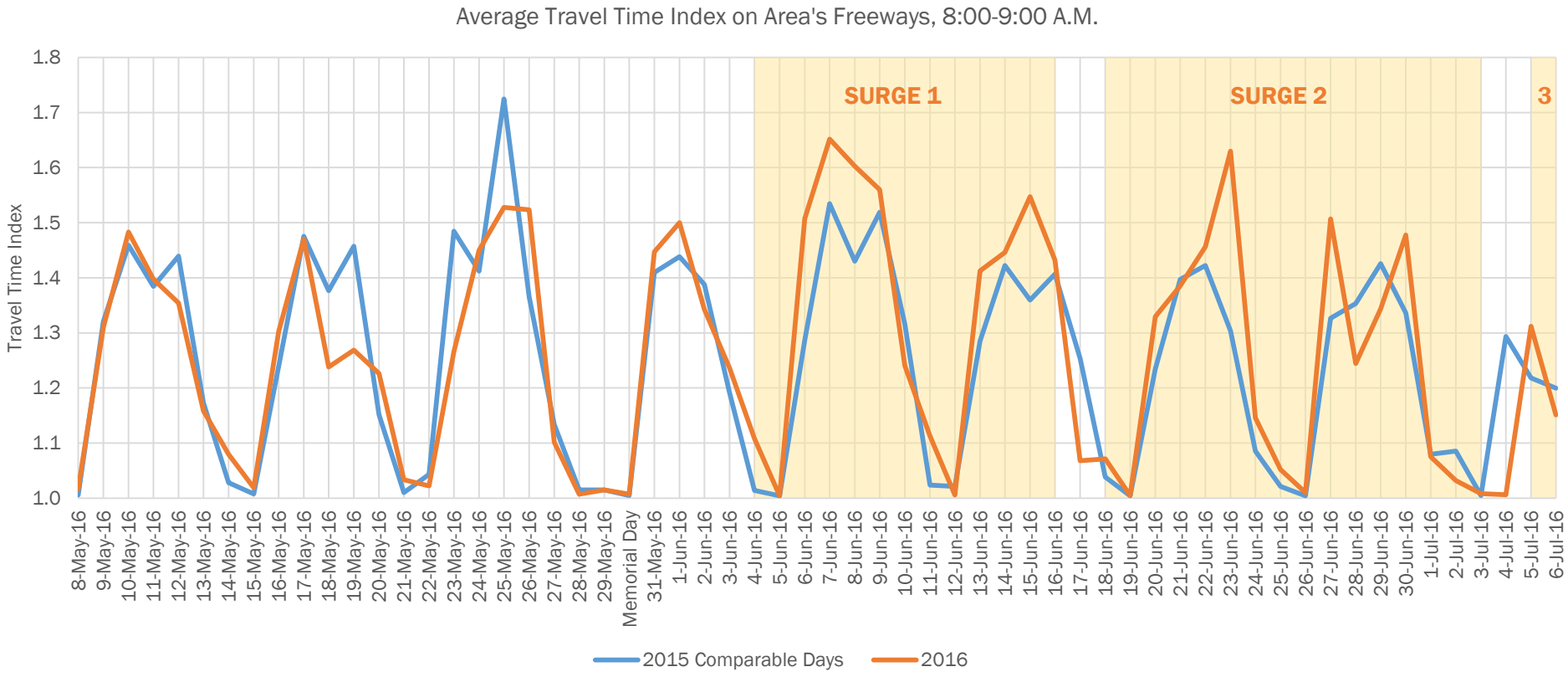
# Additional Slides

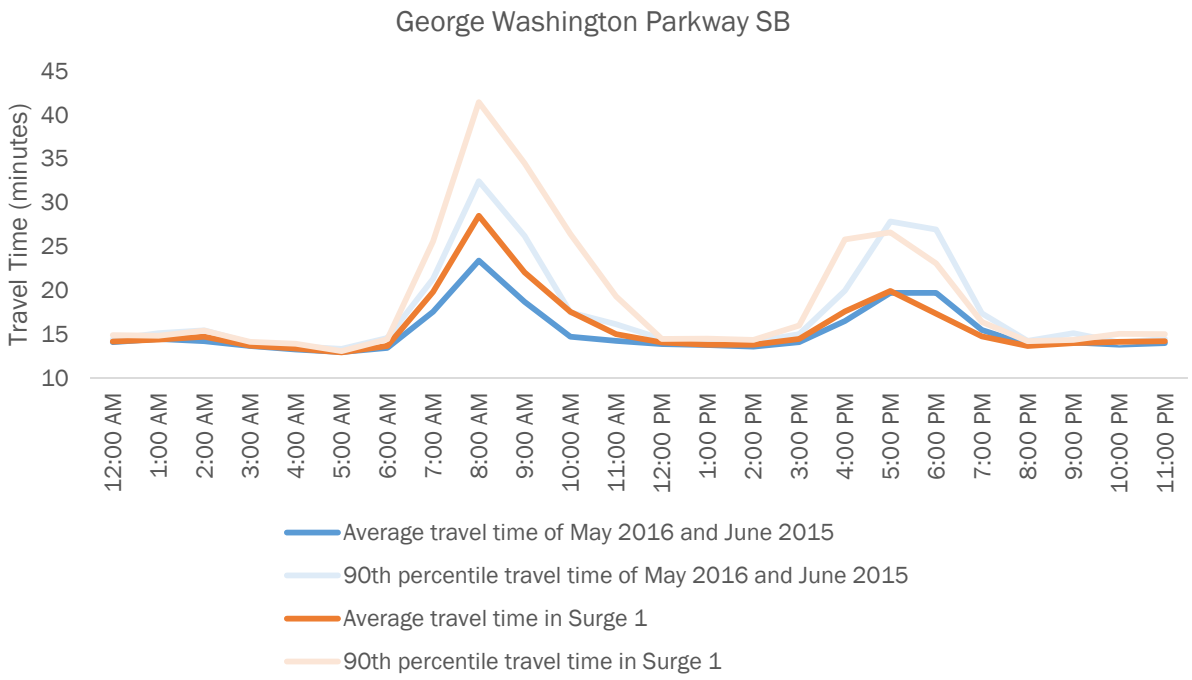
# 7:00-8:00 AM in Surges 1 & 2



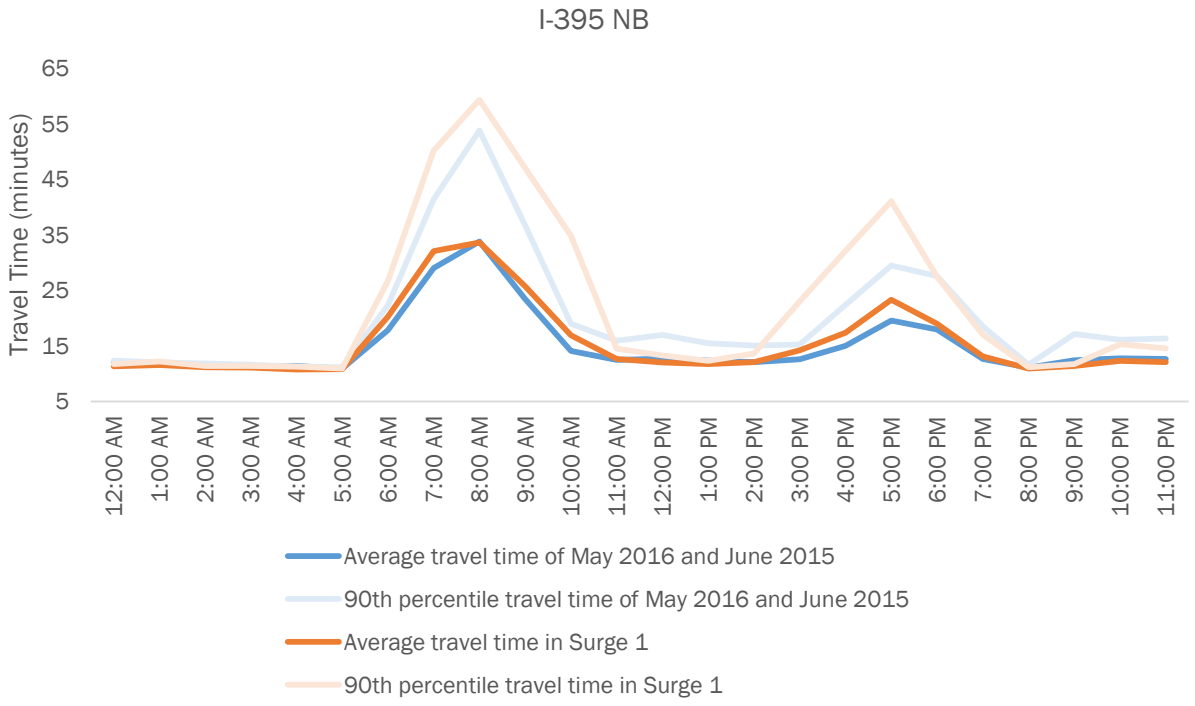
# 8:00-9:00 AM in Surges 1 & 2



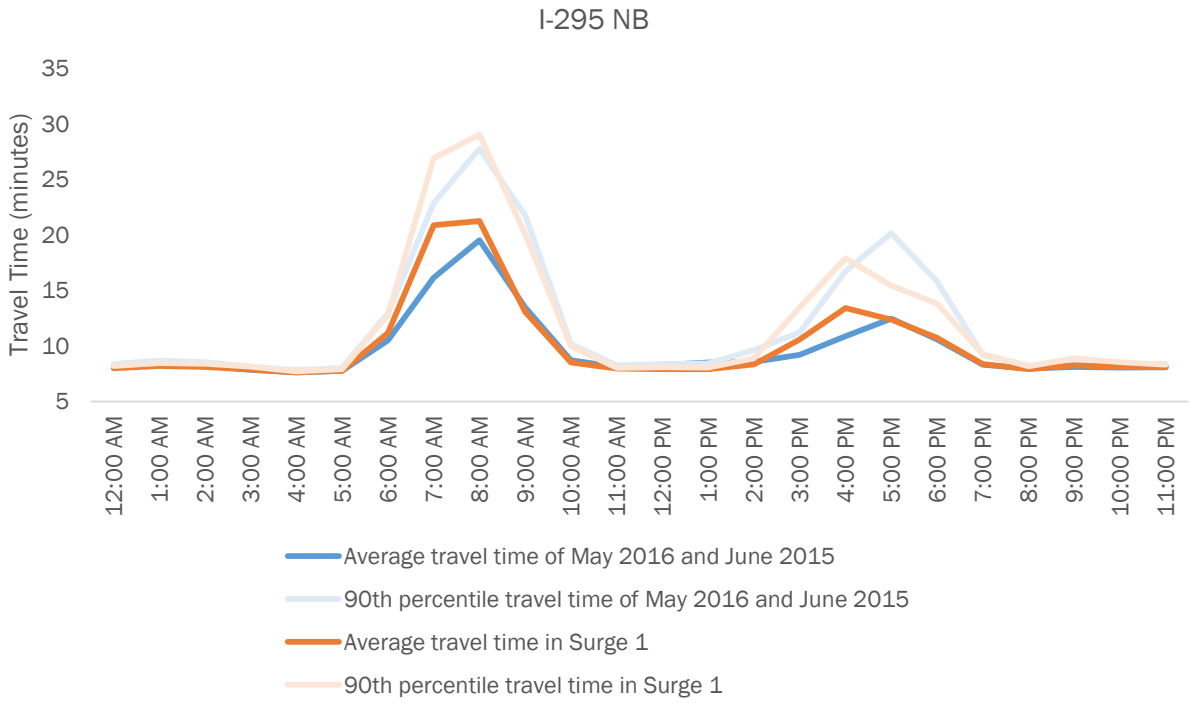
# Route Travel Time: GW Pkwy SB



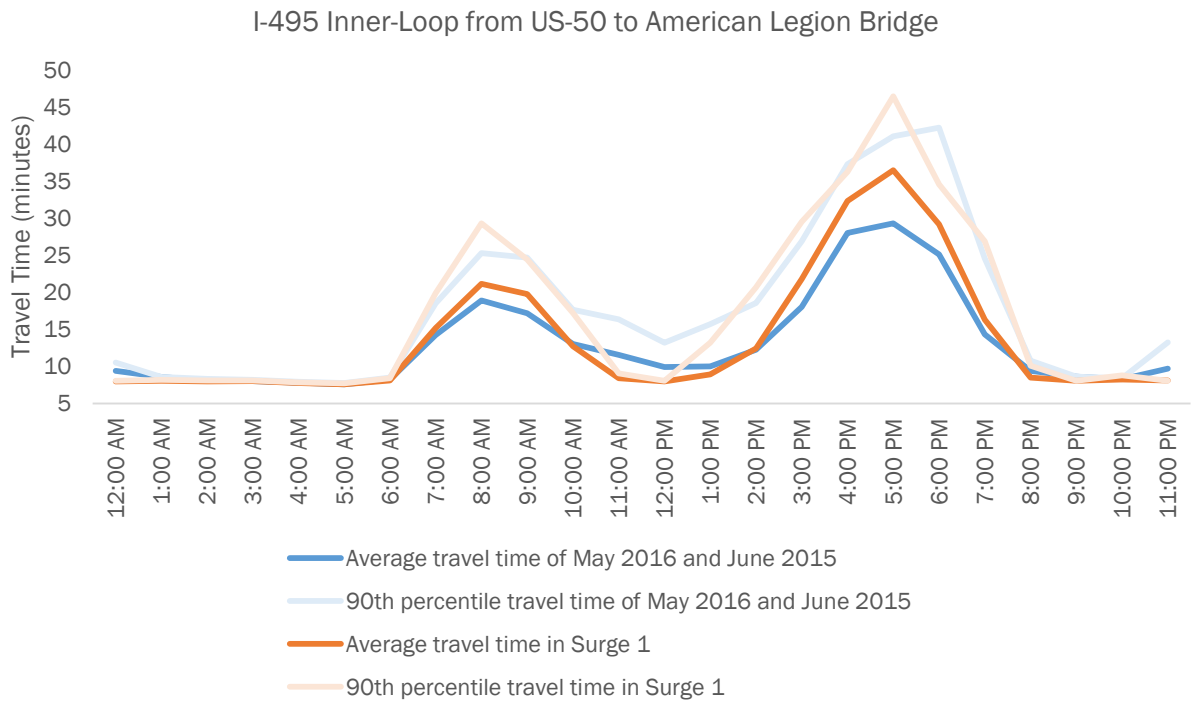
# Route Travel Time: I-395 NB



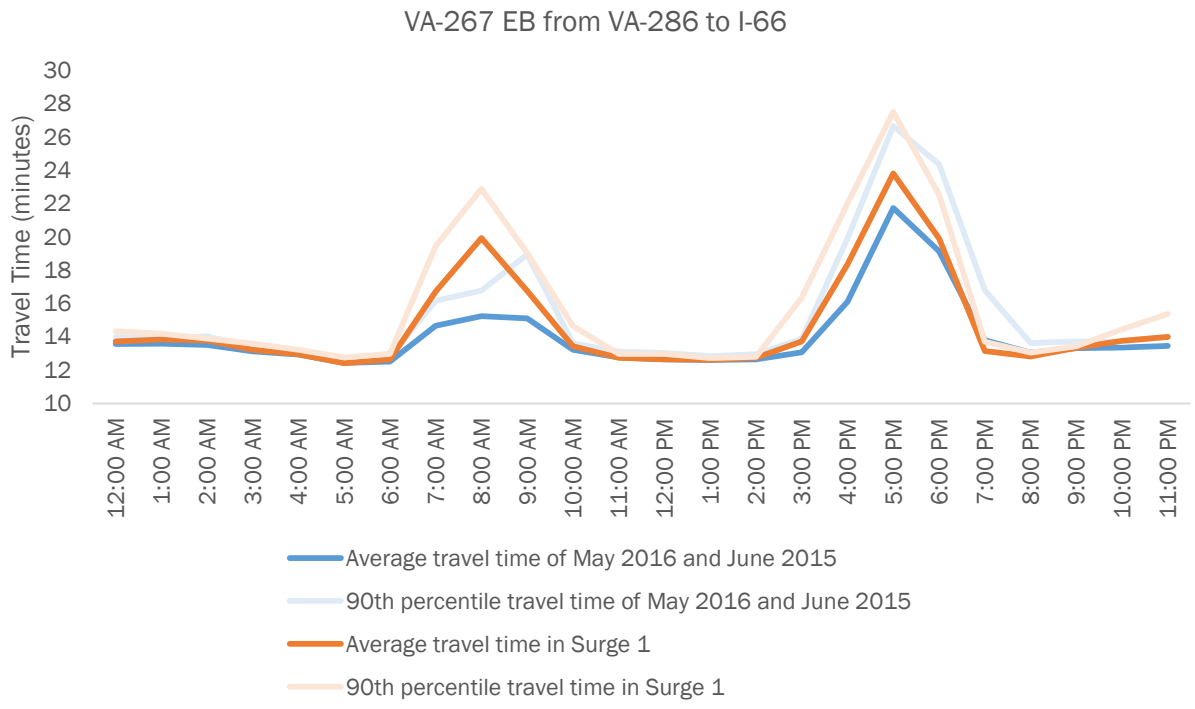
# Route Travel Time: I-295 NB



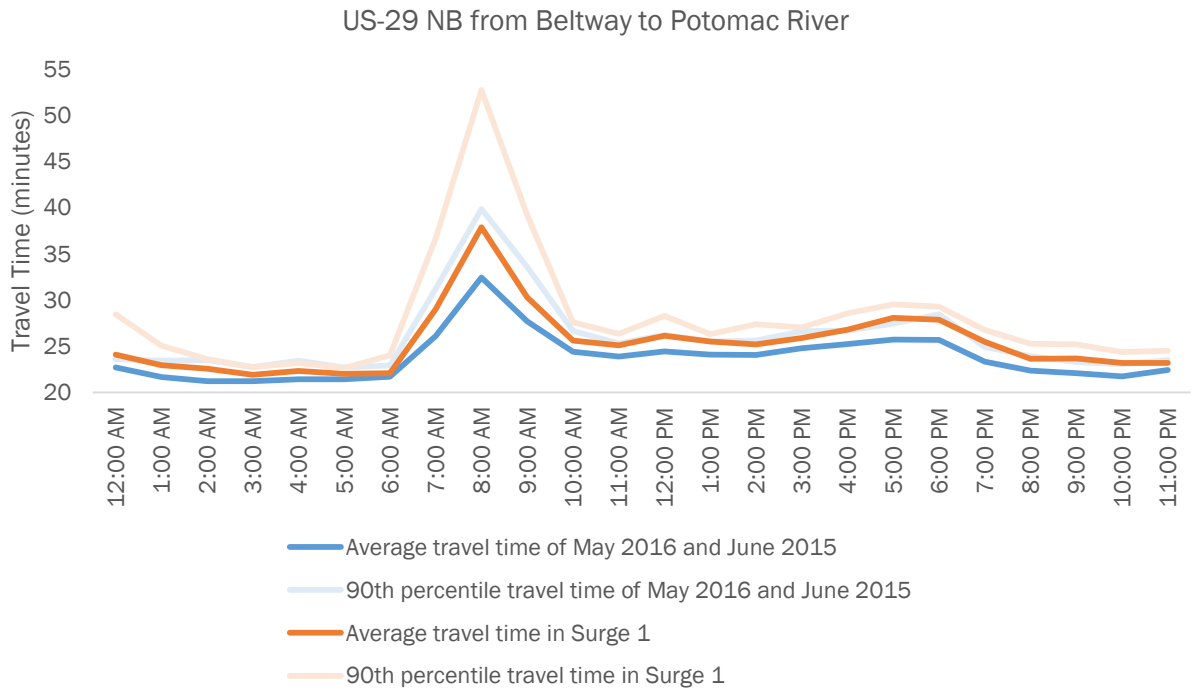
# Route Travel Time: I-495 IL from US-50 to ALB



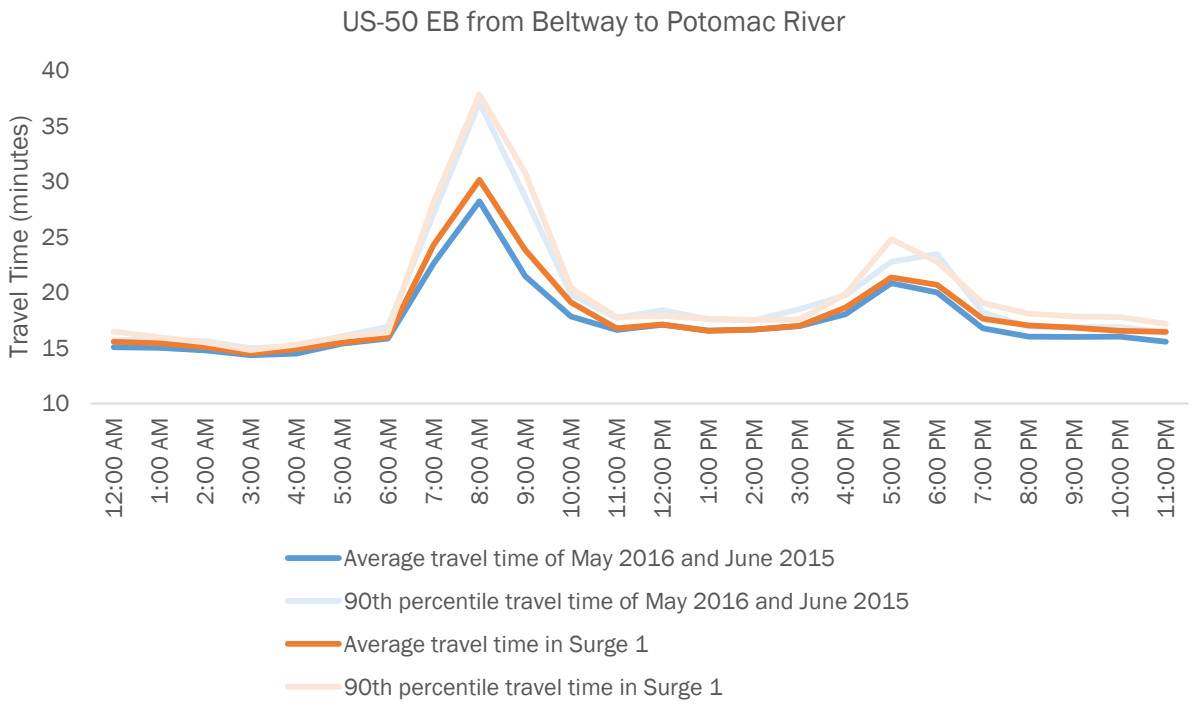
# Route Travel Time: VA-267 EB



# Route Travel Time: US-29 NB



# Route Travel Time: US-50 EB



# Route Travel Time: I-395 NB